IN THE CLAIMS

This listing of the claims replaces all prior versions of the claims in the application. Note that claims 8, 18, 20, 21, 23, 24, and 31 have been newly canceled, without prejudice or disclaimer.

1. (Currently Amended) An isolated polypeptide ~~comprising an amino acid sequence selected from the group consisting of:~~

~~a) an amino acid sequence of SEQ ID NO:1,~~

~~b) a naturally occurring amino acid sequence having at least 90% sequence identity to an amino acid sequence of SEQ ID NO:1,~~

~~c) a biologically active fragment of an amino acid sequence of SEQ ID NO:1, and~~

~~d) an immunogenic fragment of an amino acid sequence of SEQ ID NO:1~~ encoded by a polynucleotide of claim 3.

2. (Original) An isolated polypeptide of claim 1 comprising an amino acid sequence of SEQ ID NO:1.

3. (Currently Amended) An isolated polynucleotide encoding a polypeptide ~~of claim 1~~ selected from the group consisting of:

a) a polypeptide comprising the amino acid sequence of SEQ ID NO:1,

b) a polypeptide comprising a naturally occurring amino acid sequence at least 90% identical to the amino acid sequence of SEQ ID NO:1,

c) a polypeptide comprising a polypeptide fragment, wherein the polypeptide fragment consists of a fragment of the amino acid sequence of SEQ ID NO:1, and wherein the polypeptide fragment has sorting nexin activity, and

d) a polypeptide comprising an immunogenic fragment, wherein the immunogenic fragment consists of at least 10 contiguous amino acids of SEQ ID NO:1.

4. (Currently Amended) An isolated polynucleotide of claim 3, encoding a polypeptide ~~of claim 2~~ comprising the amino acid sequence of SEQ ID NO:1.

5. (Original) An isolated polynucleotide of claim 4 comprising a polynucleotide sequence of SEQ ID NO:3.

6. (Original) A recombinant polynucleotide comprising a promoter sequence operably linked to a polynucleotide of claim 3.

7. (Original) A cell transformed with a recombinant polynucleotide of claim 6.

8. (Canceled)

9. (Currently Amended) A method for producing a polypeptide encoded by a polynucleotide of claim [[1]] 3, the method comprising:

a) culturing a cell under conditions suitable for expression of the polypeptide, wherein said cell is transformed with a recombinant polynucleotide, and said recombinant polynucleotide comprises a promoter sequence operably linked to a polynucleotide ~~encoding the polypeptide~~ of claim [[1]] 3, and

b) recovering the polypeptide so expressed.

10. (Original) An isolated antibody which specifically binds to a polypeptide of claim 1.

11. (Original) An isolated polynucleotide comprising a polynucleotide sequence selected from the group consisting of:

a) a polynucleotide sequence selected from the group consisting of SEQ ID NO:3-4,

b) a naturally occurring polynucleotide sequence having at least 70% sequence identity to a polynucleotide sequence selected from the group consisting of SEQ ID NO:3-4,

c) a polynucleotide sequence complementary to a),

d) a polynucleotide sequence complementary to b), and

e) an RNA equivalent of a)-d).

12. (Original) An isolated polynucleotide comprising at least 60 contiguous nucleotides of a polynucleotide of claim 11.

13. (Original) A method for detecting a target polynucleotide in a sample, said target polynucleotide having a sequence of a polynucleotide of claim 11, the method comprising:

a) hybridizing the sample with a probe comprising at least 20 contiguous nucleotides comprising a sequence complementary to said target polynucleotide in the sample, and which probe specifically hybridizes to said target polynucleotide, under conditions whereby a hybridization complex is formed between said probe and said target polynucleotide or fragments thereof; and

b) detecting the presence or absence of said hybridization complex, and, optionally, if present, the amount thereof.

14. (Original) A method of claim 13, wherein the probe comprises at least 60 contiguous nucleotides.

15. (Original) A method for detecting a target polynucleotide in a sample, said target polynucleotide having a sequence of a polynucleotide of claim 11, the method comprising:

a) amplifying said target polynucleotide or fragment thereof using polymerase chain reaction amplification, and

b) detecting the presence or absence of said amplified target polynucleotide or fragment thereof, and, optionally, if present, the amount thereof.

16. (Currently Amended) A ~~pharmaceutical~~ composition comprising ~~an effective amount of~~ a polypeptide of claim 1 and a pharmaceutically acceptable excipient.

17. (Currently Amended) A ~~pharmaceutical~~ composition of claim 16, wherein the polypeptide comprises [[an]] the amino acid sequence of SEQ ID NO:1.

18. (Canceled)

19. (Original) A method for screening a compound for effectiveness as an agonist of a polypeptide of claim 1, the method comprising:

a) exposing a sample comprising a polypeptide of claim 1 to a compound, and

b) detecting agonist activity in the sample.

20.-21. (Canceled)

22. (Original) A method for screening a compound for effectiveness as an antagonist of a polypeptide of claim 1, the method comprising:

a) exposing a sample comprising a polypeptide of claim 1 to a compound, and

b) detecting antagonist activity in the sample.

23.-24. (Canceled)

25. (Currently Amended) A method of screening for a compound that specifically binds to the polypeptide of claim 1, [[said]] the method comprising ~~the steps of~~:

a) combining the polypeptide of claim 1 with at least one test compound under suitable conditions, and

b) detecting binding of the polypeptide of claim 1 to the test compound, thereby identifying a compound that specifically binds to the polypeptide of claim 1.

26. (Original) A method of screening for a compound that modulates the activity of the polypeptide of claim 1, said method comprising:

a) combining the polypeptide of claim 1 with at least one test compound under conditions permissive for the activity of the polypeptide of claim 1,

b) assessing the activity of the polypeptide of claim 1 in the presence of the test compound, and

c) comparing the activity of the polypeptide of claim 1 in the presence of the test compound with the activity of the polypeptide of claim 1 in the absence of the test compound, wherein a change in the activity of the polypeptide of claim 1 in the presence of the test compound is indicative of a compound that modulates the activity of the polypeptide of claim 1.

27. (Currently Amended) A method for screening a compound for effectiveness in altering expression of a target polynucleotide, wherein said target polynucleotide comprises a sequence of claim 5, the method comprising:

a) exposing a sample comprising the target polynucleotide to a compound, [[and]] under conditions suitable for the expression of the target polynucleotide,

b) detecting altered expression of the target polynucleotide, and

c) comparing the expression of the target polynucleotide in the presence of varying amounts of the compound and in the absence of the compound.

28. (Currently Amended) An isolated polynucleotide of claim 11, comprising [[a]] the polynucleotide sequence of SEQ ID NO:4.

29. (Original) A recombinant polynucleotide comprising a promoter sequence operably linked to a polynucleotide of claim 28.

30. (Original) A cell transformed with a recombinant polynucleotide of claim 29.

31. (Canceled)

32. (Original) A method for producing a polypeptide comprising an amino acid sequence of SEQ ID NO:2, the method comprising:

a) culturing the cell of claim 30 under conditions suitable for expression of the polypeptide, and

b) recovering the polypeptide so expressed.

33. (Currently Amended) A method for screening a compound for effectiveness in altering expression of a target polynucleotide, wherein said target polynucleotide comprises a sequence of claim 28, the method comprising:

a) exposing a sample comprising the target polynucletide to a compound, [[and]] under conditions suitable for the expression of the target polynucleotide,

b) detecting altered expression of the target polynucleotide, and

c) comparing the expression of the target polynucleotide in the presence of varying amounts of the compound and in the absence of the compound.

34. (New) A method of screening for potential toxicity of a test compound, the method comprising:

a) treating a biological sample containing nucleic acids with the test compound,

b) hybridizing the nucleic acids of the treated biological sample with a probe comprising at least 20 contiguous nucleotides of a polynucleotide of claim 11 under conditions whereby a specific hybridization complex is formed between said probe and a target polynucleotide in the biological sample, said target polynucleotide comprising a polynucleotide sequence of a polynucleotide of claim 11 or fragment thereof,

c) quantifying the amount of hybridization complex, and

d) comparing the amount of hybridization complex in the treated biological sample with the amount of hybridization complex in an untreated biological sample, wherein a difference in the amount of hybridization complex in the treated biological sample indicates potential toxicity of the test compound.

35. (New) An isolated polynucleotide of claim 11, selected from the group consisting of:

a) a polynucleotide comprising a polynucleotide sequence selected from the group consisting of SEQ ID NO:3-4,

b) a polynucleotide comprising a naturally occurring polynucleotide sequence at least 90% identical to a polynucleotide sequence selected from the group consisting of SEQ ID NO:3-4,

c) a polynucleotide complementary to a polynucleotide of a),

d) a polynucleotide complementary to a polynucleotide of b), and

e) an RNA equivalent of a)-d).

36. (New) An isolated polynucleotide of claim 11, selected from the group consisting of:

a) a polynucleotide comprising the polynucleotide sequence of SEQ ID NO:3,

b) a polynucleotide comprising a naturally occurring polynucleotide sequence at least 90% identical to the polynucleotide sequence of SEQ ID NO:3,

c) a polynucleotide complementary to a polynucleotide of a),

d) a polynucleotide complementary to a polynucleotide of b), and

e) an RNA equivalent of a)-d).

37. (New) An isolated polynucleotide of claim 11, selected from the group consisting of:

a) a polynucleotide comprising the polynucleotide sequence of SEQ ID NO:3,

b) a polynucleotide complementary to a polynucleotide of a), and

c) an RNA equivalent of a)-b).

38. (New) An isolated polynucleotide comprising at least 60 contiguous nucleotides of a polynucleotide selected from the group consisting of:

a) a polynucleotide comprising a polynucleotide sequence selected from the group consisting of SEQ ID NO:3-4,

b) a polynucleotide comprising a naturally occurring polynucleotide sequence at least 90% identical to a polynucleotide sequence selected from the group consisting of SEQ ID NO:3-4,

c) a polynucleotide complementary to a polynucleotide of a),

d) a polynucleotide complementary to a polynucleotide of b), and

e) an RNA equivalent of a)-d).

39. (New) An isolated polynucleotide of claim 38, comprising at least 60 contiguous nucleotides of a polynucleotide selected from the group consisting of:

a) a polynucleotide comprising the polynucleotide sequence of SEQ ID NO:3,

b) a polynucleotide comprising a naturally occurring polynucleotide sequence at least 90% identical to the polynucleotide sequence of SEQ ID NO:3,

c) a polynucleotide complementary to a polynucleotide of a),

d) a polynucleotide complementary to a polynucleotide of b), and

e) an RNA equivalent of a)-d).

40. (New) An isolated polynucleotide of claim 38, comprising at least 60 contiguous nucleotides of a polynucleotide selected from the group consisting of:

a) a polynucleotide comprising the polynucleotide sequence of SEQ ID NO:3,

b) a polynucleotide complementary to a polynucleotide of a), and

c) an RNA equivalent of a)-b).